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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,601	09/12/2003	R. Donald Grafton	A8130.0153/P153	7642
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DICKSTEIN SHAPIRO LLP			POUS, NATALIE R	
1825 EYE STREET NW			ART UNIT	
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3731

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/660,601	Applicant(s) GRAFTON ET AL.	
	Examiner Natalie Pous	Art Unit 3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/19/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/14/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Regarding the claim objections

Examiner acknowledges amendments to the claims to correct the improper claim dependency. The previous objection is withdrawn.

Regarding the 35 USC 102 rejections

Applicant's arguments with respect to claims 1, 3, 7, 8 11 and 15 have been considered but are moot based on applicants amendments, and in view of the new ground(s) of rejection.

Regarding the 35 USC 103 rejections

Applicant's arguments, see pages 6-7, filed 10/19/06, with respect to the rejection(s) of the claim(s) under 103 with respect to Dreyfuss have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Morgan et al., see below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Morgan et al. (US 6666877).

Regarding Claim 1, Morgan teaches a suture anchor, comprising: a bioabsorbable (Column 5, proximate lines 45-47) anchor body (10) having a proximal end and a distal end; and a suture loop (38) disposed completely within the anchor body (fig. 4).

Regarding Claim 3, Morgan teaches the suture anchor of claim 1, wherein the anchor body (10) is provided with a drive socket (proximal-most portion of body) at the proximal end.

Regarding Claim 4, Morgan teaches the suture anchor of claim 4, wherein the drive socket has at least one slot (30) for receiving a corresponding protrusions on a driver head for driving the suture anchor.

Regarding Claim 7, Morgan teaches the suture anchor of claim 1, further comprising a strand of a knot tying suture (44) threaded through the suture loop (38).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11, 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan in view of Grafton et al. (US 5964783).

Morgan teaches a suture anchor, comprising:

- a bioabsorbable (Column 5, proximate lines 45-47) anchor body (10) having a proximal end and a distal end; and a suture loop (38) disposed completely within the anchor body (fig. 4)
- wherein the anchor body (10) is provided with a drive socket (proximal-most portion of body) at the proximal end.
- wherein the drive socket has at least one slot (30) for receiving a corresponding protrusions on a driver head for driving the suture anchor.
- a strand of a knot tying suture (44) threaded through the suture loop (38).
- Wherein the anchor body is threaded (18)

Morgan fails to teach wherein the suture loop is insert-molded into the anchor body.

Grafton teaches a suture anchor wherein the suture loop is insert-molded into the body

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in order to effectively secure the suture loop to the anchor body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Morgan by insert molding the suture loop to the anchor body in order to effectively secure the suture loop to the anchor body.

Claims 9-10, 14 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan or the combination of Morgan and Grafton (5964783) in view of Grafton et al. (US 6319270).

Morgan or the combination of Morgan and Grafton (5964783) teaches all limitations of previous dependent claims 1 and 11 as previously described, but fails to teach wherein the anchor body has a constant outer diameter and a stepped tapered inner diameter and wherein the anchor thread extending between the proximal end and the distal end of the body has a crest which tapers from wide to narrow from the proximal end to the distal end of the body. Grafton (6319270) teaches a suture anchor wherein the anchor body has a constant outer diameter and a stepped tapered inner diameter and wherein the anchor thread extending between the proximal end and the distal end of the body has a crest which tapers from wide to narrow from the proximal end to the distal end of the body in order to provide an increased percentage of thread surface area for each turn of the anchor, thus providing increased pull-out strength, and a decreased tendency for back-out (Column 2, proximate lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Morgan or the combination of Morgan and Grafton (5964783) as taught by Grafton (6319270) in order to provide an increased percentage of thread

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surface area for each turn of the anchor, thus providing increased pull-out strength, and a decreased tendency for back-out.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan or the combination of Morgan and Grafton (5964783), in view of Bidwell (US 74489).

Morgan or the combination of Morgan and Grafton (5964783) teaches all limitations of previous dependent claims 1 and 11 as previously described, but fails to teach wherein the anchor body has a constant outer diameter and a tapered inner diameter. Bidwell teaches a screw wherein the anchor body has a constant outer diameter and a stepped tapered inner diameter in order to provide an entrance point at the distal end while maintaining strength at this region. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Morgan or the combination of Morgan and Grafton (5964783) with a constant outer diameter and a tapered inner diameter in order to provide an entrance point at the distal end while maintaining strength at this region.

Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan or the combination of Morgan and Grafton (5964783) and further as a matter of design choice. Morgan or the combination of Morgan and Grafton (5964783) teaches all limitations of preceding dependent claims 1 and 11 as previously described, but fails to teach wherein the suture anchor has a predetermined length and wherein the suture loop is recessed from the proximal end of the anchor body by about one third of the predetermined length. It would have been an obvious matter of design choice to

provide the suture loop recessed from the proximal end of the anchor body by about one third of the length since applicant has not disclosed that doing so provides any advantage or serves any particular purpose, and it appears that the configuration of Morgan or the combination of Morgan and Grafton (5964783) performs the task of providing a recessed loop equally well as the disclosed application. Further, it has been held that discovering the optimum value of a result effective variable involves only routines skill in the art. In re Boesch, 617, F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan in view of Schmieding et al. (US 6214031). Morgan teaches all limitations of claims 1, 3 and 4 as described previously, but fails to teach wherein the slot terminates distally in a suture hole transverse to a longitudinal axis of the anchor body provided within the anchor body. Schmieding teaches a suture anchor comprising slot (14) that terminates distally in a suture hole (12) transverse to a longitudinal axis of the anchor body provided within the anchor body (2) in order to accommodate the suture within the driver tool when delivering the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Morgan as taught by Schmieding in order to accommodate the suture within the driver tool when delivering the device.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan in view of Stahelin (US 5695497). Morgan teaches all limitations of preceding dependent claim 1 as previously described, but fails to teach wherein the anchor body is threaded from the proximal end to the distal end. Stahelin teaches a body inserted anchor

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wherein the anchor body is threaded from the proximal end to the distal end in order to securely hold the anchor in bone material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Morgan with an anchor body threaded from the proximal end to the distal end in order to securely hold the anchor in bone material.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie Pous whose telephone number is (571) 272-

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6140. The examiner can normally be reached on Monday-Friday 8:00am-5:30pm, off every 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NRP
12/7/06


ANH TUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER

12/8/06